EMC® VNX™

VNX5300™ Block

Installation Guide

P/N 300-012-924

REV 04

EMC²

CONTENTS

Setup

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Introduction

Audience

Although your VNX system is customer installable, EMC recommends that the installation be performed by someone who has a general background in information technology. While prior training is not required, customers who successfully installed this product were trained as either:

◆ EMC Proven Professionals

◆ Microsoft Certified Technology Specialists

◆ Cisco Certified Network Associates

◆ CompTIA A+ certified technicians

Your service provider offers a variety of installation and implementation services designed to assist you in putting your VNX system into production as quickly and efficiently as possible. Contact your sales representative to take advantage of these service offerings.

Shipment Methods

There are two ways in which the product is packed and shipped to you. It will be shipped completely-installed and cabled in an EMC cabinet or it will be shipped in multiple boxes for installation into a customer-provided cabinet.

Overview of installing an EMC cabinet

If your system was shipped in an EMC cabinet, the installation process involves the following steps:

1. Read and complete the prerequisite tasks listed in "Before you begin".

2. Unpack the shipping boxes and verify the shipping contents from the packing instructions on the outside of the box as described in "Unpacking the shipping boxes" on page 9.

3. Verify the cabling and connect the system to your network as described in "Cable your system" on page 17.

4. Power up your system and verify that the system powered up correctly by checking the LEDs of the storage processors, standby power supply, and disk array enclosures. This is described in "Power up" on page 21.

5. Complete the tasks listed in "Setup" on page 35.

Overview of installing in a customer cabinet

If your system was shipped to be installed in your own cabinet, the installation process involves the following:

1. Read and complete the prerequisite tasks listed in "Before you begin".

2. Unpack the shipping boxes and verify the shipping contents as described in "Unpack your system" on page 9.

3. Remove shipping container contents and assemble the components in your cabinet as described in "Assemble components in your cabinet" on page 11.

4. Cable your system as described in "Cable your system" on page 17.

5. Power up your system by connecting power cables, and then verify that the system powered up correctly by checking the LEDs of the components as described in "Power up" on page 21.

6. Optionally, you can add a disk array enclosure (DAE), power it up and then verify that the DAE was powered up correctly by checking the DAE LED status as described in "Add additional storage" on page 25.

7. Complete the tasks listed in "Setup" on page 35.

Prepare your system

Use the Before you begin checklist to help you determine what you need to install for your system.

Before you begin

Table 1 Before you begin

Complete	Task	Comments
❏	1. Setup a product support account.	If you do not already have a Product Support account, go to https://Support.EMC.com to set one up. You will need a support account for access to the latest documentation and troubleshooting information, online chat, installation and maintenance videos, utilities and wizards.
❏	2. Complete the VNX Block Configuration Worksheet and the ESRS Worksheet.	These worksheets are provided at the end of this document. To download additional worksheets: • Go to https://Support.EMC.com, select **VNX Series**, and then download the appropriate worksheets.
❏	3. Prepare site.	For resource requirements, go to Table 2 on page 8.
❏	4. Download additional VNX installation documentation (when appropriate).	EMC provides additional documentation for installation of certain VNX systems, including: • DC-power (Telco) systems • NEBS systems • Dense-rack systems To download this documentation, go to https://Support.EMC.com, select **VNX Series › Documentation**.
❏	5. Download VNX documentation (optional).	• If you are unfamiliar with the VNX system architecture, download and review the *VNX5300 Hardware Information Guide* before you begin the installation. Go to https://Support.EMC.com and select **VNX Series › Documentation › Manuals and Guides › VNX5300 Hardware Information Guide**. • If you want to generate documentation specific for your system configuration, including to configure servers, update software, or add and replace hardware, go to https://mydocs.emc.com/VNX/.

Site requirements

Table 2 Site Requirements

Area	Requirement
Power	AC Power: For high availability, at least two 110 or 240 V AC circuits are required. **or** DC Power: See the requirements in *DC-Powered VNX Series Enclosures Installation and Operation Guide.*
Network	Two 1-Gigabit Ethernet management connections and two customer-supplied CAT5e or better cables.
Space	Cabinet vertical space: • 3U (unit) (5.25 inches, 13.3 cm) for disk processor enclosure (DPE) • 1U for the standby power supply (SPS) • For each optional DAE, either 2U or 3U
Tools	Slotted or Phillips screwdriver
Management Station	A Windows-based computer to run the initialization, maintenance, and management tools with: • Minimum screen resolution of 1280 x 800 and 256 colors • At least 500 MB of free space • Connection on same LAN subnet as your system if you will use it to initialize the system • Windows Domain Controller recommended • SMTP server network connection to the VNX5300 and the management host • JRE* • Browser* (Internet Explorer, Mozilla Firefox) *Supported versions are listed in the release notes.
Network information	The management port and login information in the Planning Worksheets of this install guide. This information includes: • A static IP address for each storage processor in the system (for example, 123.45.6.7) • The IPv6 global prefix and gateway for each SP if your network supports the IPv6 Internet Protocol and you want to manually configure IPv6 for the management ports • The subnet mask of the LAN to which the system is connected • The default gateway address of the LAN to which the system is connected

Unpack your system

Unpacking the shipping boxes

You will have received your system either fully assembled and cabled in an EMC cabinet, or in shipping boxes to be unpacked and installed into your own cabinet.

If your system was shipped fully assembled and cabled in an EMC cabinet:

1. Follow the unpacking instructions on the outside of the box.

2. Go directly to "Cable your system" on page 17 of this installation guide to verify the cabling.

If your system was shipped in separate boxes and needs to be assembled in your own cabinet:

1. Verify that you have received all of the system components, including cables, bezels, rails, and screws. Table 3 below lists the shipping contents.

Table 3 Shipping contents

	Components	Accessories
❏	Standby power supply (SPS)	• Mounting screws • Bezel • Bezel brackets • Management cable • Power cable • Rail kit
❏	Disk Processor Enclosure (DPE)	• Mounting screws • Bezel with key • Power cables • Rail kit
❏	Cable label kit (for customer cabinet)	Cable labels for SAS cables to DAEs
❏	Documentation	Documentation kit, including: • this installation guide • Environmental Compliance information and notices • Right-to-Use (RTU) notices, as appropriate for the system

For damaged or missing components, notify your Sales associate immediately for replacements.

2. Start the unpacking and assembly process with "Assemble components in your cabinet" on page 11.

Note: Ensure that you have the latest version of the install guide and any other associated documentation. To download the most recent version of the installation guide, go to https://mydocs.emc.com/VNX/ and select **Install VNX**.

Assemble components in your cabinet

Installing rails

Installing the SPS rails

The standby power supply (SPS) is a 1U component and uses a 1U adjustable rail kit. If possible, start the installation from the bottommost allowed space in your cabinet.

1. Insert the adjustable rail slide and seat the rail extensions into the rear channel of your cabinet.

2. Extend the rail and align the front of the rails as shown. Ensure that they are level front to back and with the companion rail, left to right.

3. Insert two retention screws in the front and two retention screws in the back of each rail as shown in Figure 1.

Front

Rear detail

Alignment pin

Threaded screw holes

VNX-000750
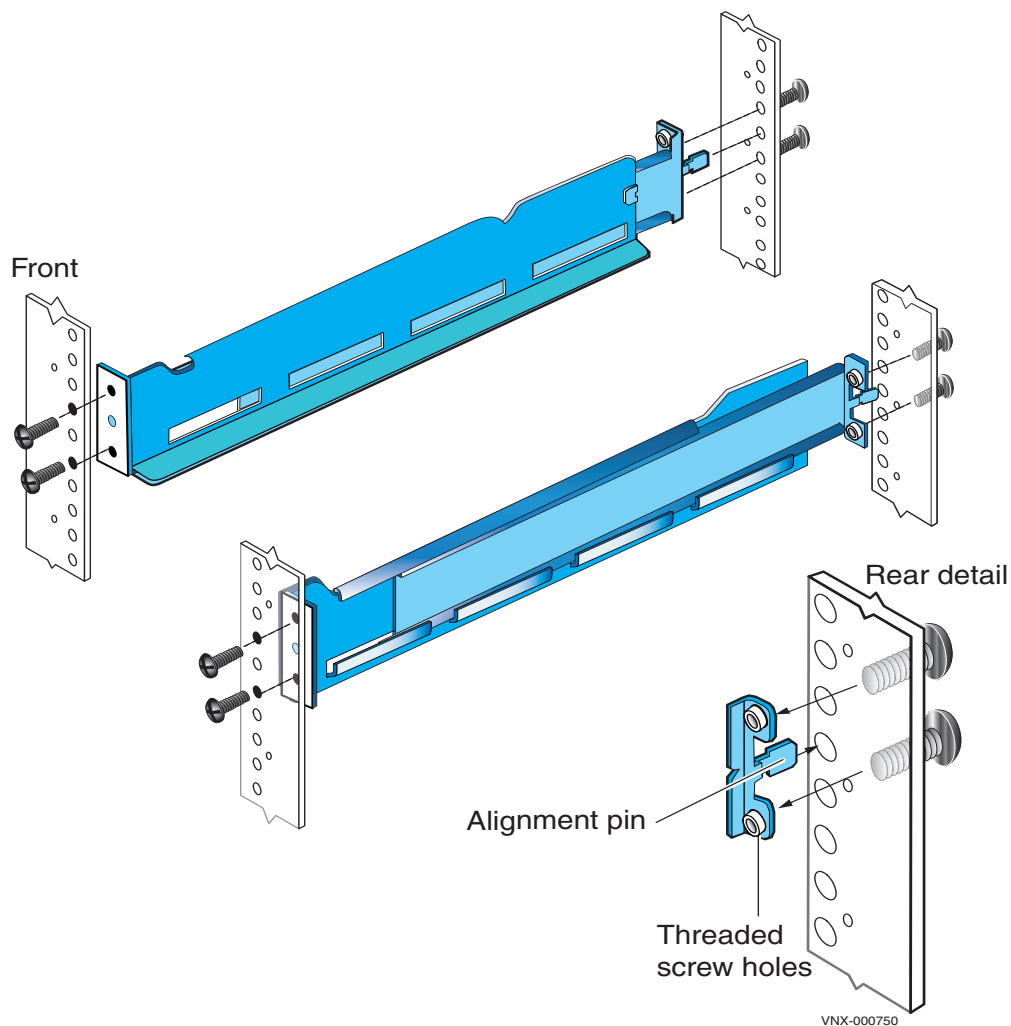
Figure 1 Installing the SPS rails

Installing the DPE rails

The DPE rails should be installed immediately above the SPS rails.

Note: All rails must be aligned level front to back and with the companion rail, left to right.

1. Insert the adjustable 3U rail slide and seat both alignment pins into the rear channel of your cabinet.

2. Extend the rail and align the front of the rails as shown in Figure 2.

3. Insert two retention screws in the middle two holes in the front.

4. Insert two retention screws in the back of each rail.
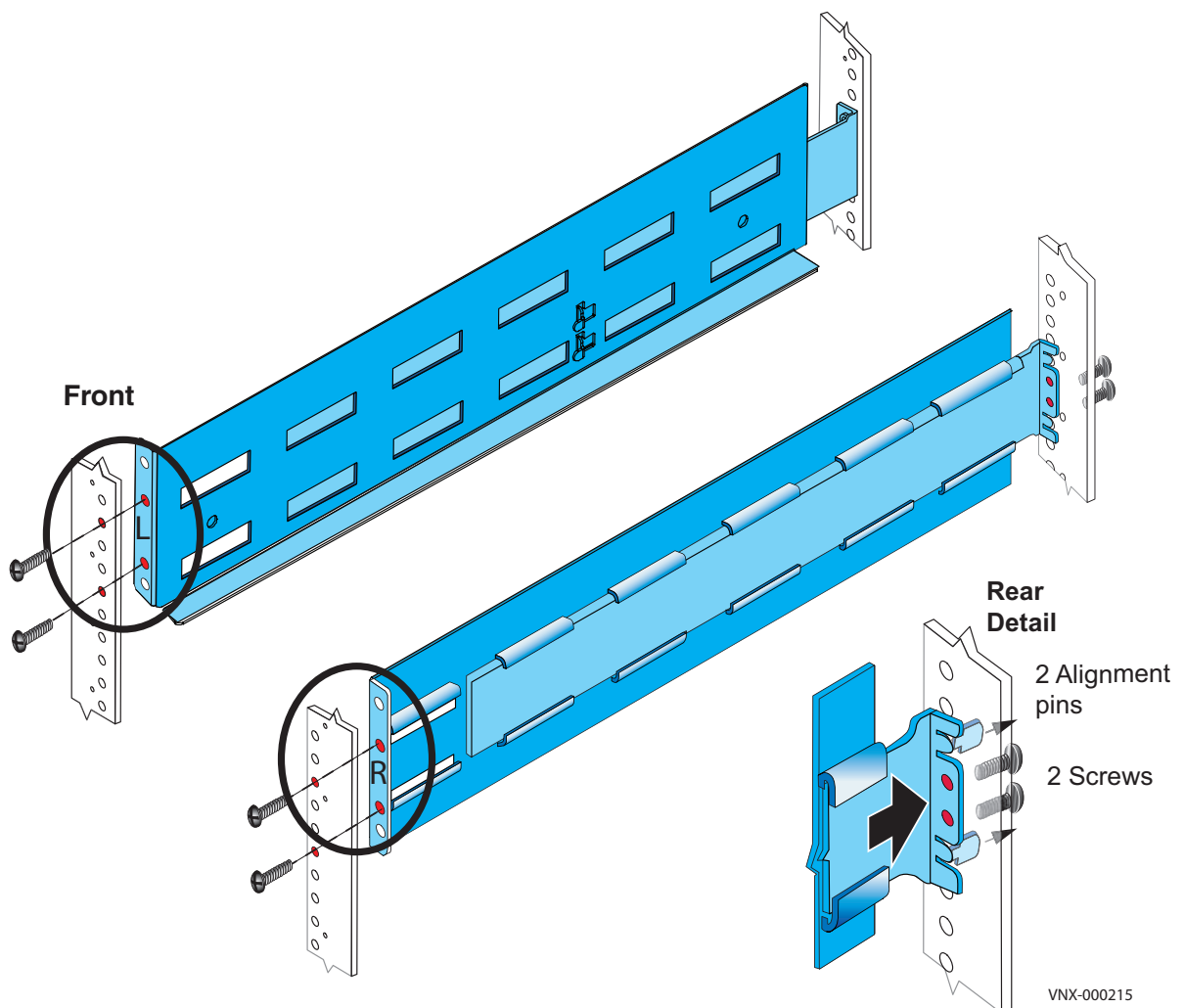
Figure 2 Installing the DPE rails

Installing the components

> **⚠ CAUTION**
>
> **Some of the components are heavy and may require two people. If needed, use an appropriate lifting device (mechanical lift).**

Installing the standby power supply

1. Slide the SPS enclosure into the cabinet rails at the bottom of the rack as shown in Figure 3. Ensure that the enclosure is fully in the cabinet. The rail stops in the back will seat into the back of the enclosure at the correct depth, and the front of the enclosure will be flush with the cabinet face.

2. When the SPS is in place, insert the screws and bezel brackets to hold the enclosure in place in the cabinet. Do not tighten the screws completely until all of the components are in place .

SPS 1 unit bracket
The indentation is toward the inside of the rack.

Front

Standby power supply enclosure

VNX-000766
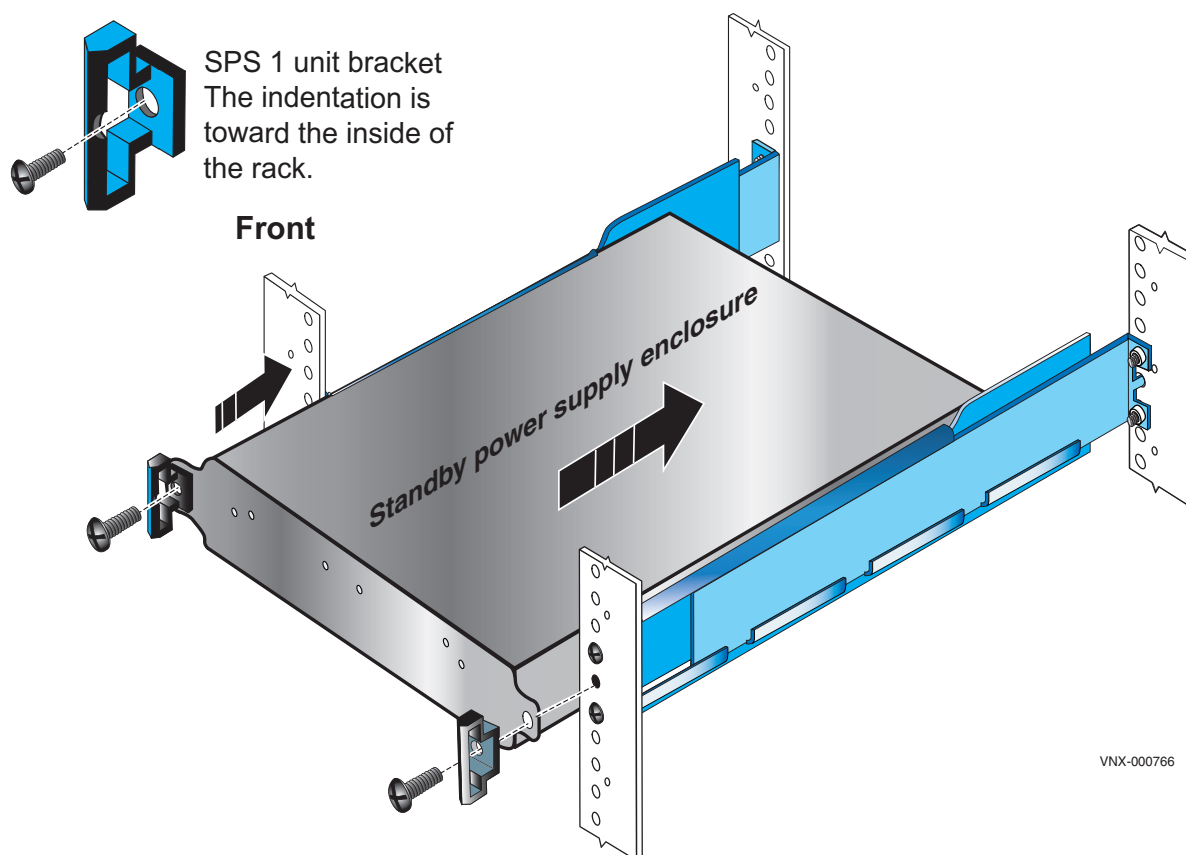
Figure 3 Installing the standby power supply

Installing the disk processor enclosure

There are two types of disk processor enclosures (DPEs). Your disk processor enclosure can be either a 3U, 25 2.5" drive DPE or a 3U, 15 3.5" drive DPE as shown in Figure 4.

3U, 25 2.5" drive Disk processor enclosure front
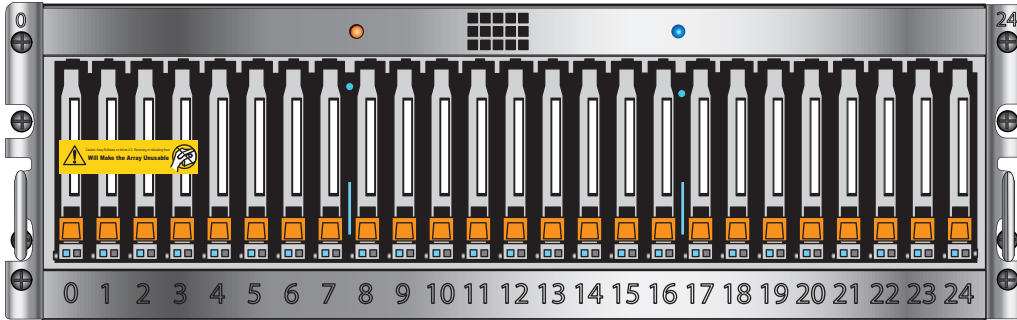
3U, 15 3.5" drive Disk processor enclosure front

3U, Disk processor enclosure Rear
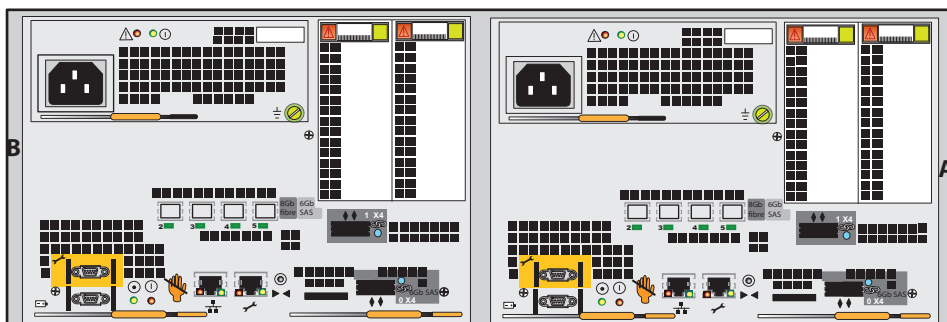
VNX-000189

Figure 4 Types of DPE(s)

1. Locate the Product ID/SN from the product serial number tag (PSNT) located at the back of the DPE as shown in Figure 5.

2. Record this number to use when you register the product during system setup steps.

IMPORTANT

Be careful when you slide the enclosure into the rails. The PSNT tag on the corner of the enclosure as shown in Figure 5 can inadvertently become jammed, cut off, or block the enclosure's seating.
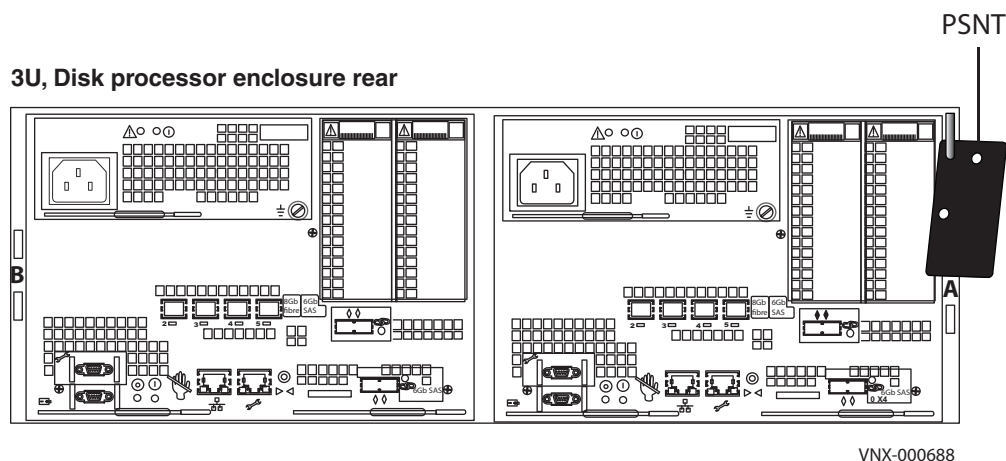
Figure 5 PSNT tag on the rear of the 3U DPE

3. Slide the disk processor enclosure (DPE) into the 3U DPE rails in the cabinet. Ensure that the enclosure is fully in the cabinet. The rail stops in the back will seat into the back of the enclosure at the correct depth, and the front of the enclosure will be flush with the cabinet face.

4. When the DPE is in place, insert and tighten all of the screws as shown in Figure 6 on page 16. It may be easier to install the screws working in a diagonal pattern, such as bottom left and top right, bottom right and top left.

Alignment pins

Front

Disk processor enclosure

Standby power supply

4 screws hold the
component in the cabinet
(2 per side)

Through component, through rack, through rail

Rail hole

Through rack, through rail

Rail hole

Rail hole

Through rack, through rail

Through component, through rack, through rail

2 Brackets
4 Screws each side

Right side bracket
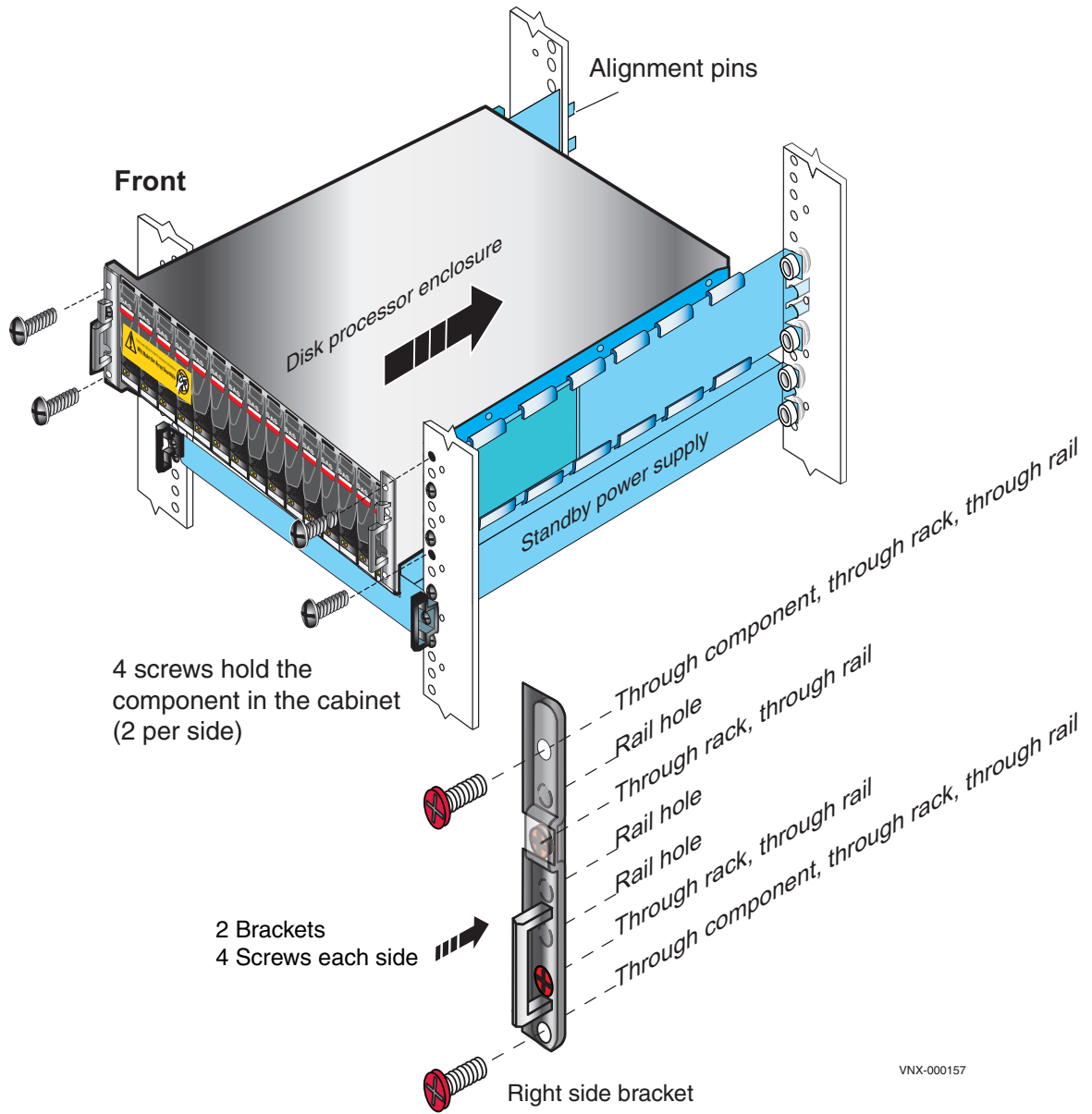
VNX-000157

Figure 6 Installing the DPE

Cable your system

Cables for your system have cable labels pre-attached.

Cabling the standby power supply to SP serial port

1. Locate the cables shown in Figure 7. These cables have RJ45 connections on one end and a 9-pin mini-connector on the other.
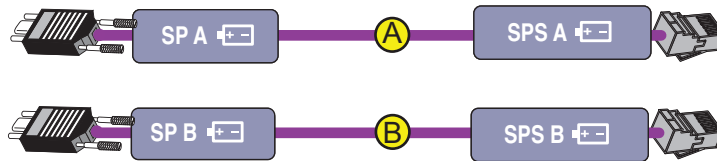
VNV-000226

Figure 7 Cables connecting SPS to SP

2. Connect SPS A to SP A. Ⓐ

3. Connect SPS B to SP B. Ⓑ

Note: SPS B is optional. If you do not have SPS B in the enclosure, your system will not have cable B to attach.

Disk processor enclosure

VNX-000134
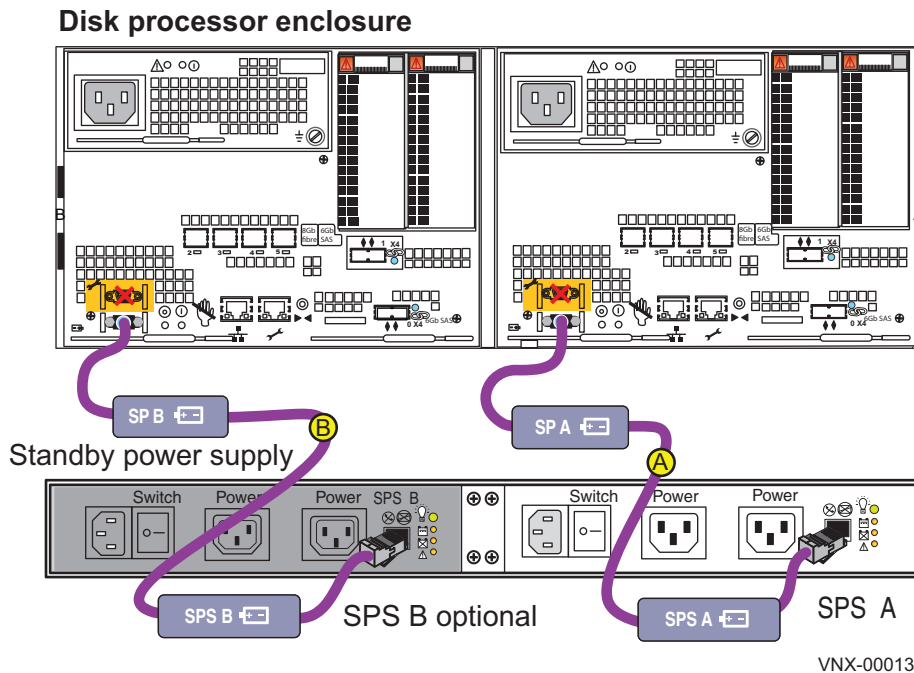
Figure 8 Cabling to management ports

Attach system to the network

Attaching storage processors to the network

The storage processors and the Windows host from which you initialize the storage system must share the same subnet on your public LAN.

1. Locate your Ethernet cables.

To public LAN
(customer supplied)

To public LAN
(customer supplied)
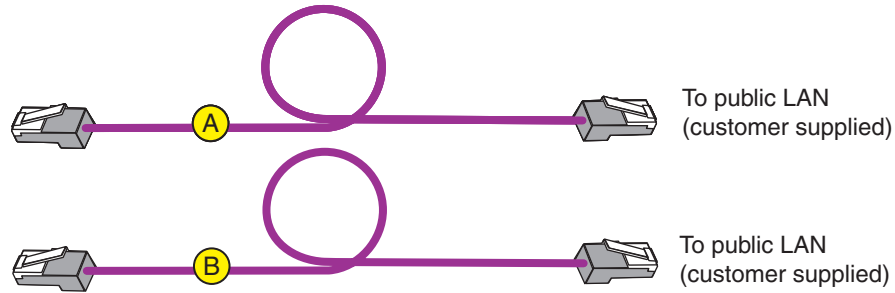
VNX-000225

Figure 9 Customer-supplied management cables

2. Connect your public LAN using a CAT 5e or better (customer-supplied) Ethernet cable to the RJ45 port on SP A . See cable A in Figure 10.

3. Connect your public LAN using a CAT 5e or better (customer-supplied) Ethernet cable to the RJ45 port on SP B . See cable B in Figure 10.

Rear

SPS B optional   SPS A

LAN

VNX-000310
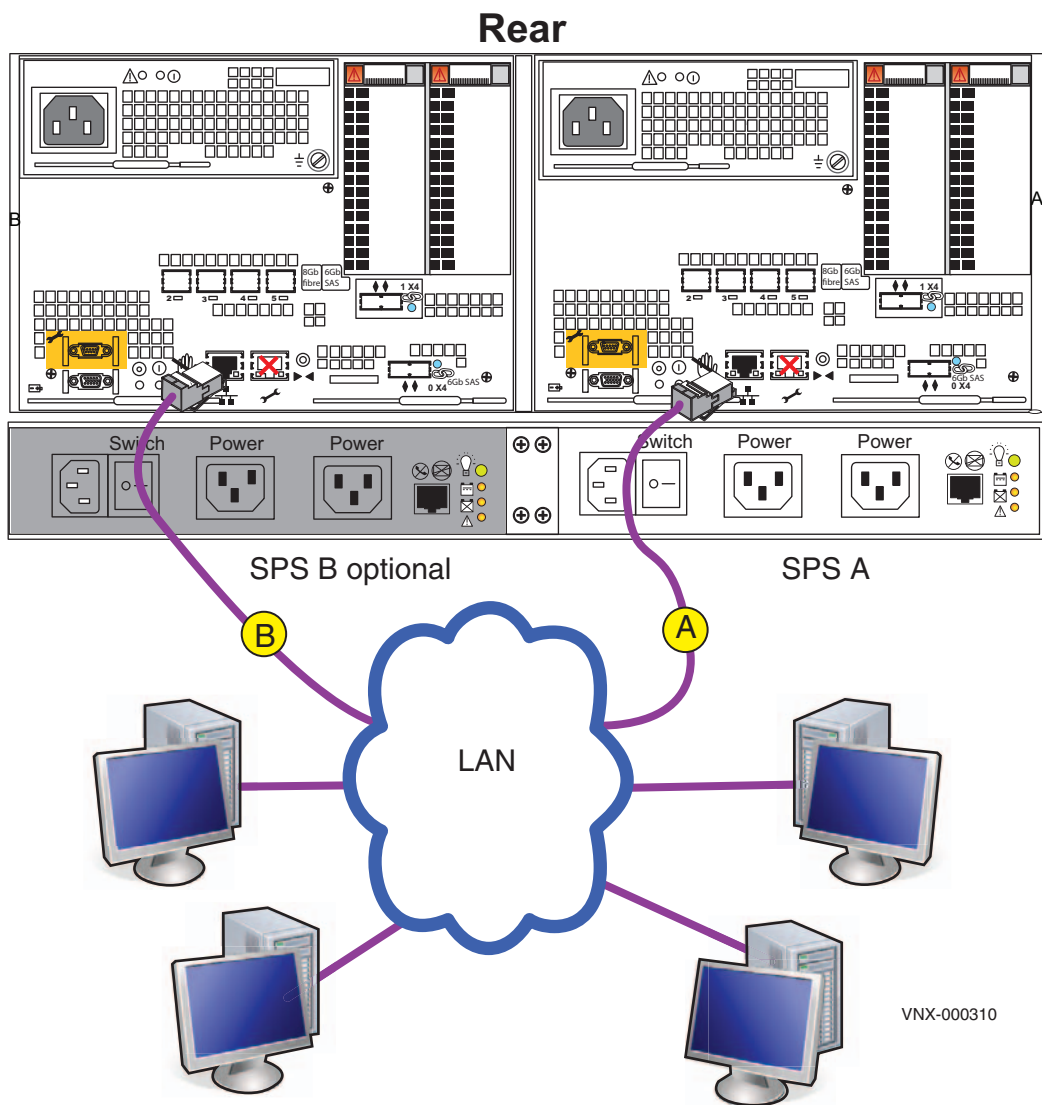
Figure 10   Attaching the SPs to the network

Power up

Before you power up

1. Ensure that the switches for SPS A and SPS B are turned Off, **E** and **F** in Figure 11.

2. Ensure that all cabinet circuit breakers are in the On position, all necessary PDU switches are switched on, and power is connected.

Connecting or verifying power cables

1. Connect the SPS power A to power distribution unit (PDU) A. **A**

2. Connect SPS A to SP A. **B**

3. Connect SPS power B to PDU B. **C**

   If your system does not include SPS B, you will not have cable **C** in your cable set.

4. Connect SPS B to SP B. **D**

   If your system does not include SPS B, plug the power cable for SP B directly into PDU B.

5. Lock each power cable in place.

6. Turn the SPS switches ON . **E** and **F**

   Wait 15 minutes for the system to power up completely.

7. Monitor the system as it powers up.
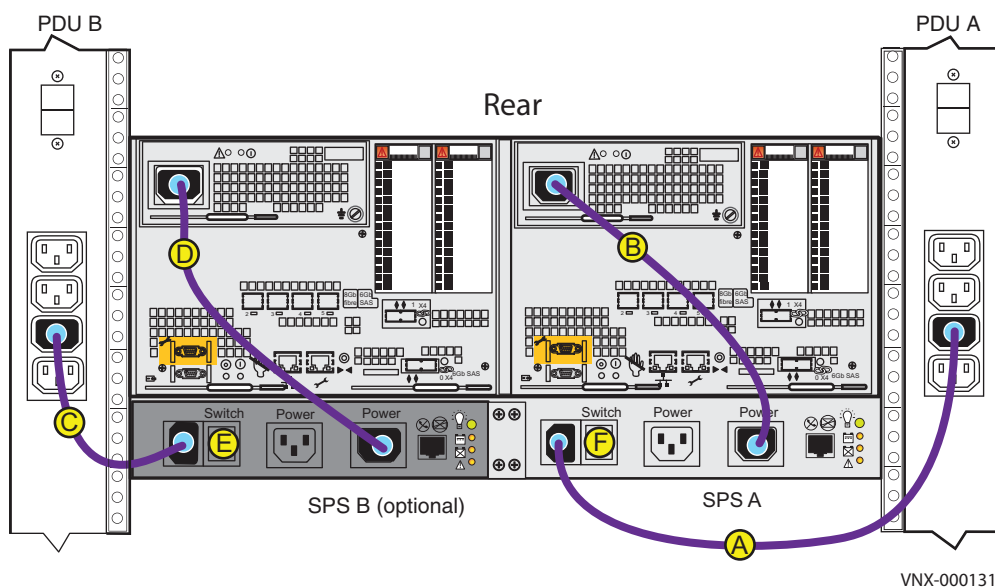
Figure 11 Connecting power cables

Verifying system status

While your system is powering up you will see green, blue, and amber activity lights blink. You can verify that your system powered up completely after 10-15 minutes.

Table 4 lists the LEDs that you need to focus on to ensure that the system is powered up correctly. The *VNX5300 Hardware Information Guide* provides details on all LEDs.

Table 4 DPE and SP LEDs

LEDs	Location	State/Color
DPE Power	Front of unit	On/Solid blue
DPE fault/status	Front of unit	Off
SP Power	Rear of unit (SP A and SP B)	On/Solid green
SP Fault	Rear of unit (SP A and SP B)	Off

1. Verify that the DPE Power LED located on the front is solid blue and the DPE fault/status is off as shown in Figure 12.
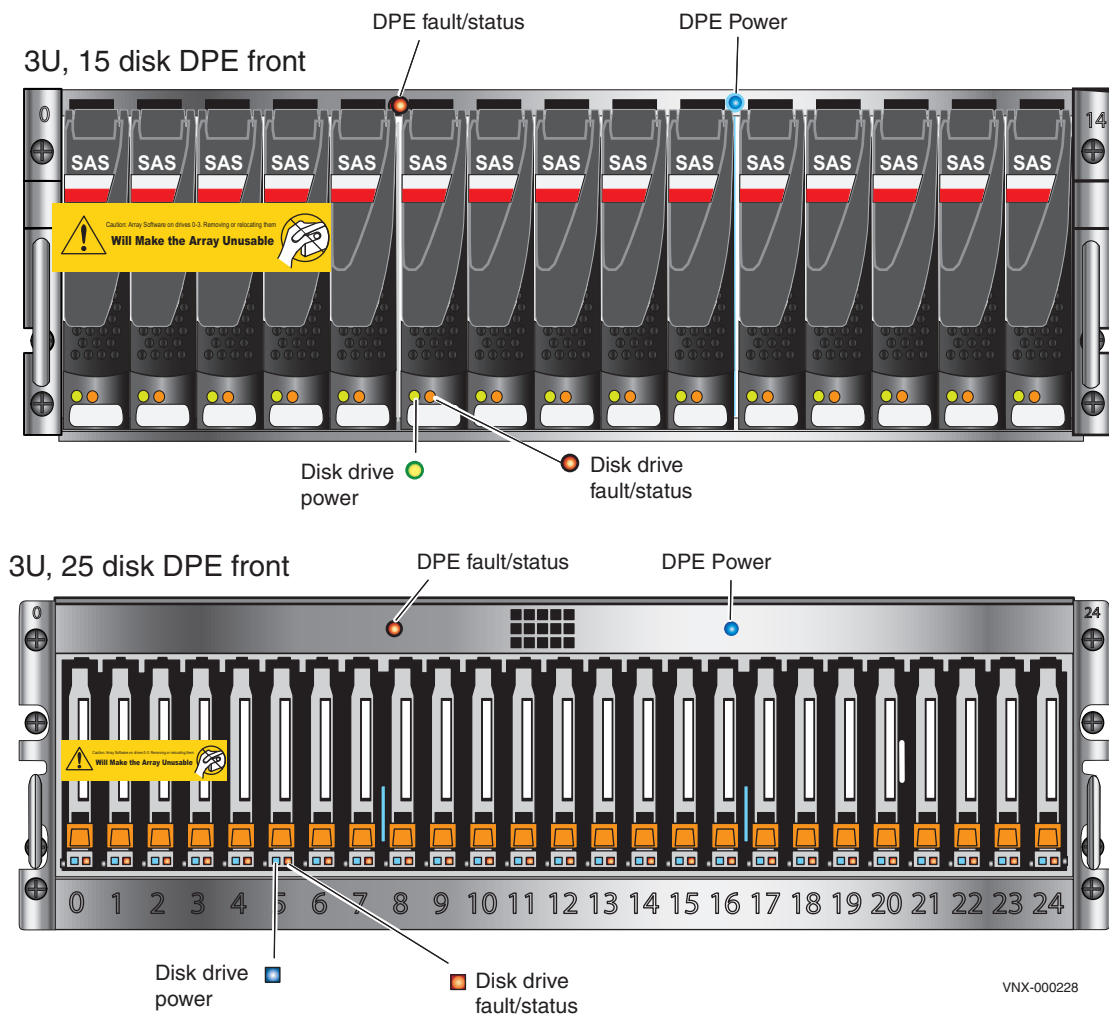
Figure 12 3U, 15 3.5'' drive DPE and 3U, 25 2.5'' drive DPE LEDs

2. Verify that the SP Power LEDs on SP A and SP B located at the rear of the DPE are solid green and the SP Fault LED is off as shown in Figure 13.

Note: If any fault LEDs are on, or if any power LEDs remain flashing after approximately 15 minutes of operation, contact your authorized service provider.

Disk processor enclosure rear

SP Power   SP Fault
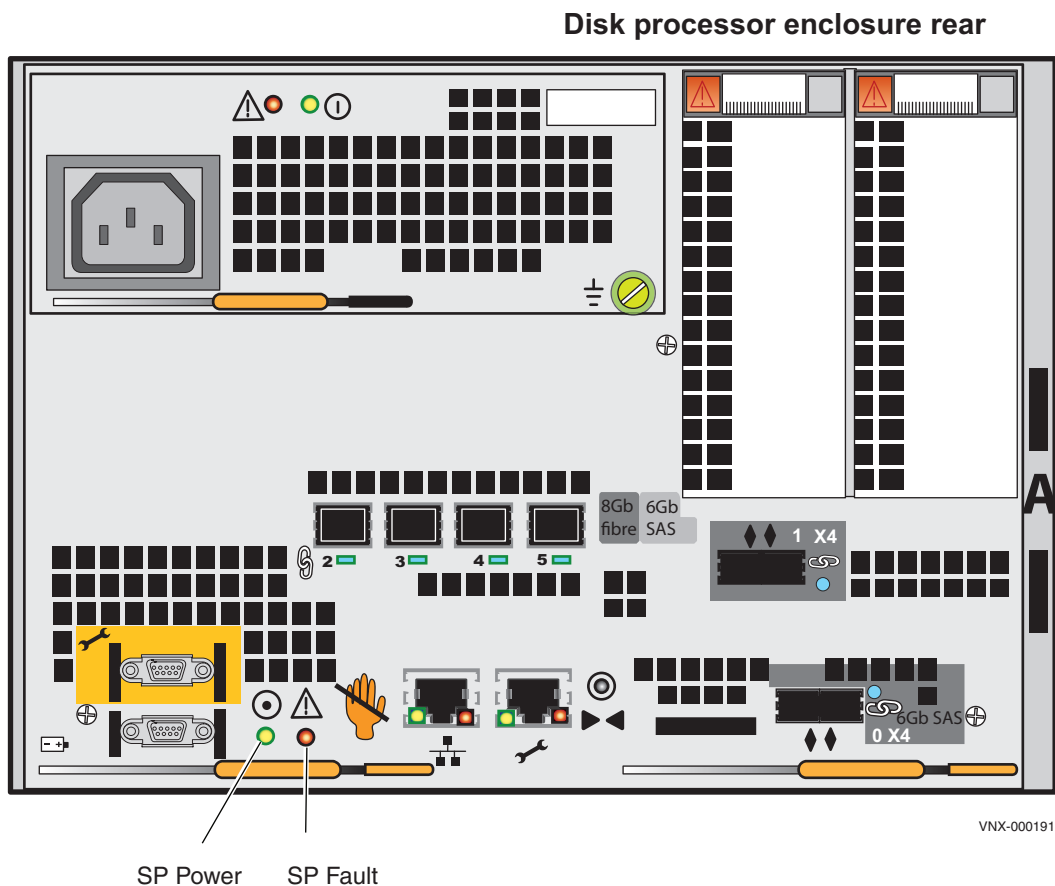
Figure 13 SP LEDs

IMPORTANT

Make sure the power-up is complete before you continue with the next task.

Add additional storage

Note: The cabling examples described in this guide are for illustration purposes only. Your system cabling might be different based on how many DAEs you install and whether you use load balancing to install these DAEs.

Disk-array enclosure types

DAEs are optional components that add extra storage. DAEs come in:

◆ 2U, 25 2.5" drive DAE shown in Figure 14.

◆ 3U, 15 3.5" drive DAE shown in Figure 15 on page 26.

They use a 2U rail kit for the 25 2.5" drive DAE or a 3U rail kit for the 15 3.5" drive DAE.

If DAEs are used, the DAEs should be installed immediately above the DPE in the cabinet. Either type of DAE may be installed. The arrangement of the DAEs in a cabinet may depend upon a number of factors. The *VNX5300 Hardware Information Guide* provides more information on DAE assembling and arrangement.

2U, 25 2.5" drive DAE Front

Rear

VNX-000227
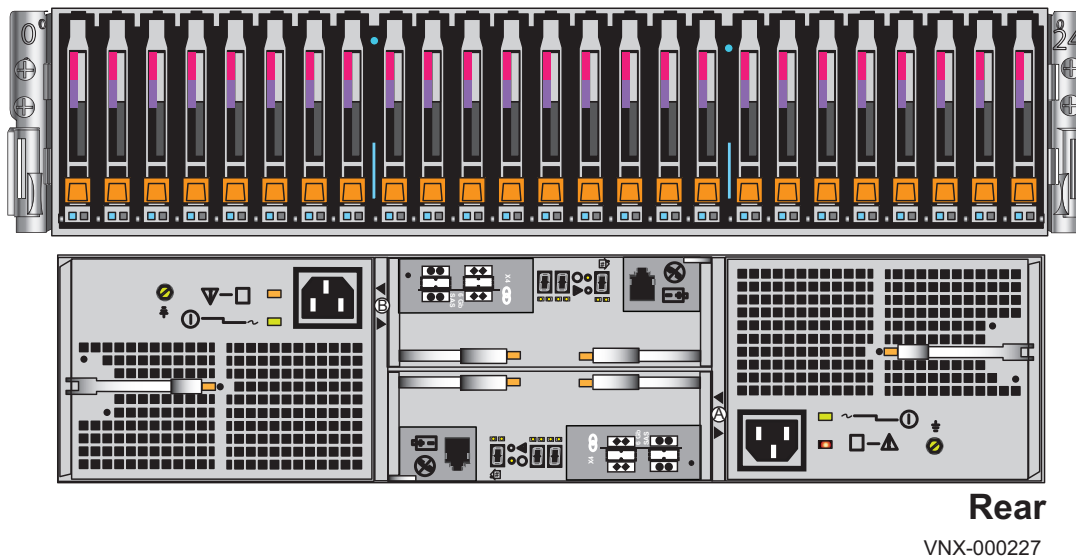
Figure 14 2U, 25 2.5" drive DAE

3U, 15 3.5" drive Disk-array enclosure

Front

Rear

VNX-000266
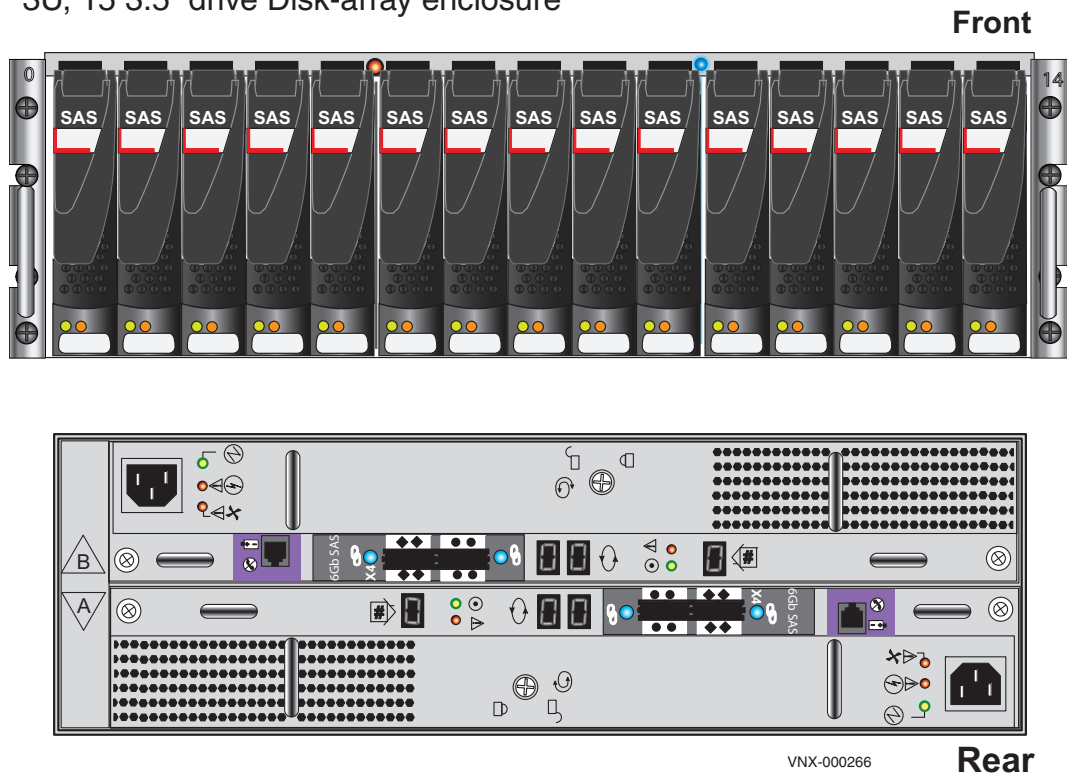
Figure 15 3U, 15 3.5" drive DAE

Assembling DAEs

> ⚠️ **CAUTION**
>
> **The DAE is heavy and should be installed into a rack by two people. To avoid personal injury and/or damage to the equipment, do not attempt to lift and install the enclosure into a rack without a mechanical lift or help from another person.**

1. Unpack the shipping containers.

2. Verify the contents. Each DAE should contain:

   • Mounting screws

   • Bezel and locking key

   • SAS cable kit

   • Power cable kit

   • Rail kit

3. Label the cables:

   a. Locate a pair of DAE cables and the sheet of labels.

   b. Attach the cable labels by matching the icons on the connectors with the icons on the labels as shown in Figure 16 and Figure 19 on page 30.

   c. Continue for all the SAS cables for your system.

Figure 16 Attach labels to the SAS cables

Install DAE rails

1. Insert the adjustable rail slide and seat both alignment pins into the rear channel of your cabinet.

2. Extend the rail and align the front of the rails as shown in Figure 17.

3. Insert two retention screws in the middle two holes of the front and two retention screws in the back of each rail (3U rails). For 2U rails, insert one screw in the lowest hole of the front and two in the back of each rail.

Front

Rear detail

2 Screws

2 Alignment pins

2 screws

VNX-000216
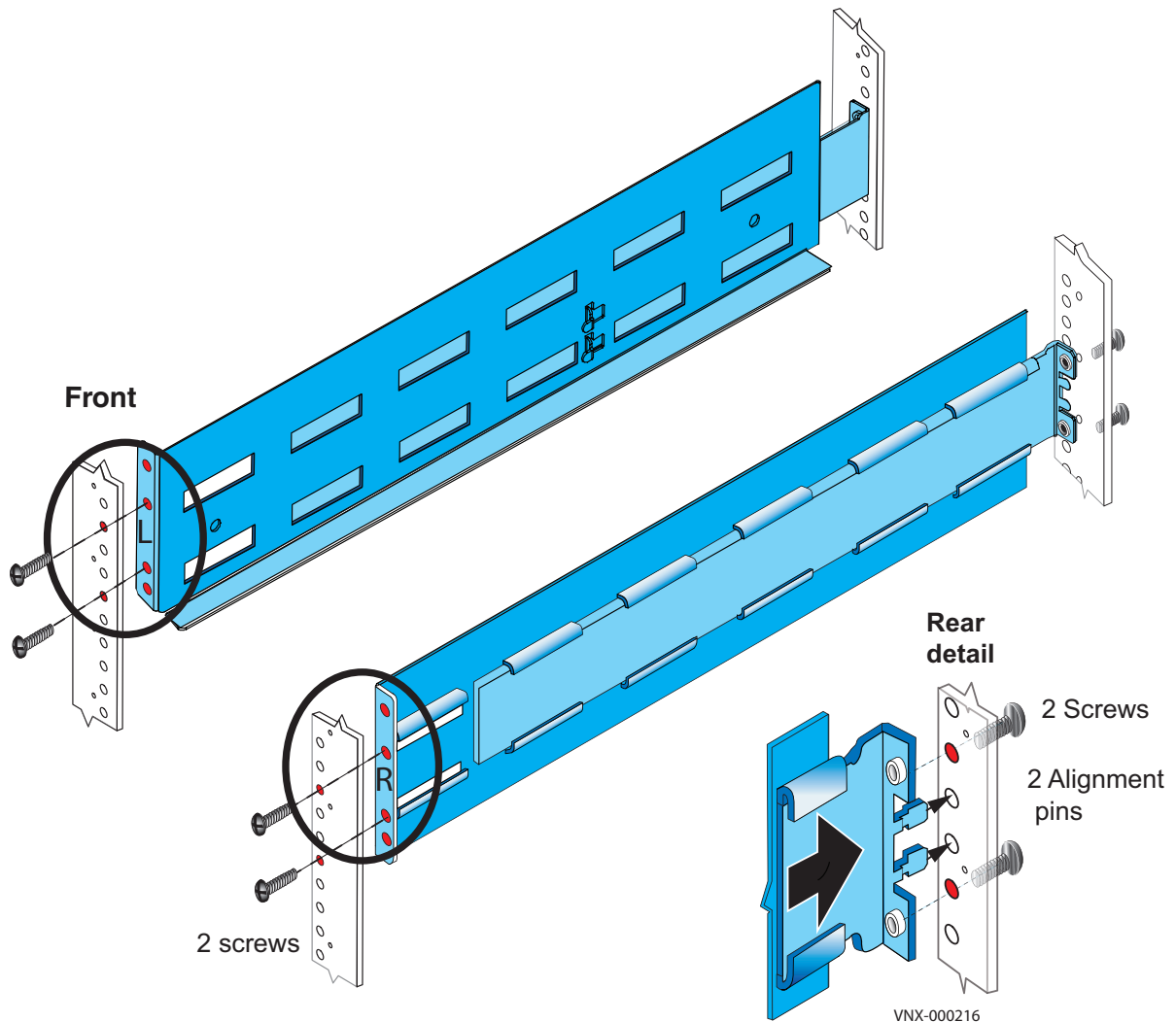
Figure 17 Installing 3U DAE rails

Install the DAE

1. Slide the disk-array enclosure (DAE) into the DAE rails in the cabinet. Ensure that the enclosure is fully in the cabinet. The rail stops in the back will seat into the back of the enclosure at the correct depth, and the front of the enclosure will be flush with the cabinet face.

2. When the DAE is in place, insert and tighten all of the screws. It may be easier to install the screws working in a diagonal pattern, such as bottom left and top right, bottom right and top left.

3. Repeat, as appropriate, with other DAEs.

Front

Right side bracket

Through component, through rack, through rail

Through rack, through rail

Through rack, through rail

Through component, through rack, through rail
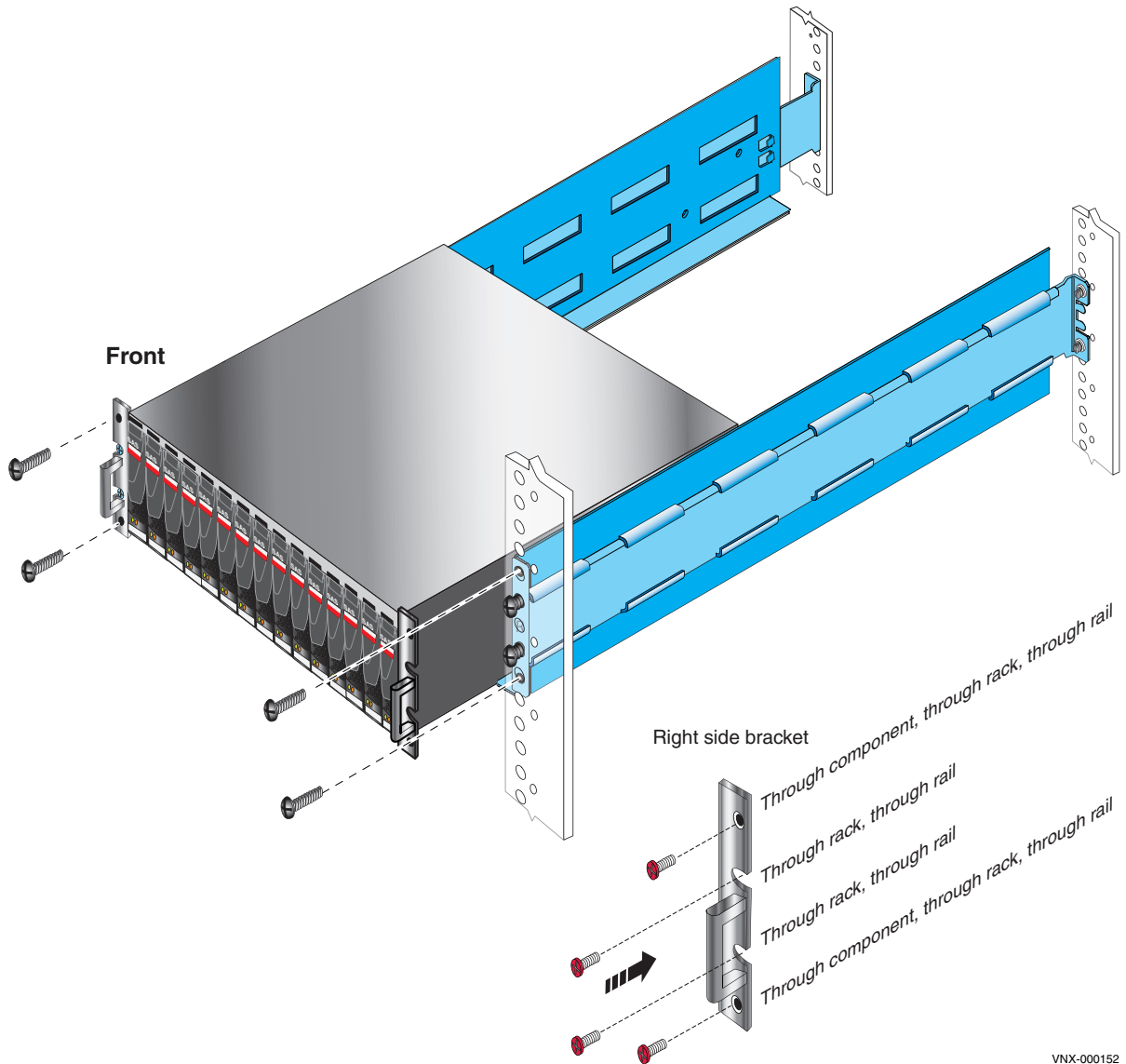
VNX-000152

Figure 18 Installing a 3U DAE in the cabinet

Connect SAS DPE and DAE cables

In this example, two DAEs are being added. This example illustrates connecting one DAE to each of the ports available on the DPE. Each DAE has two Link Control Cards (LCC), designated A or B, as shown in Figure 15 on page 26.

1. Locate one pair of cables for each DAE as shown in Figure 19.
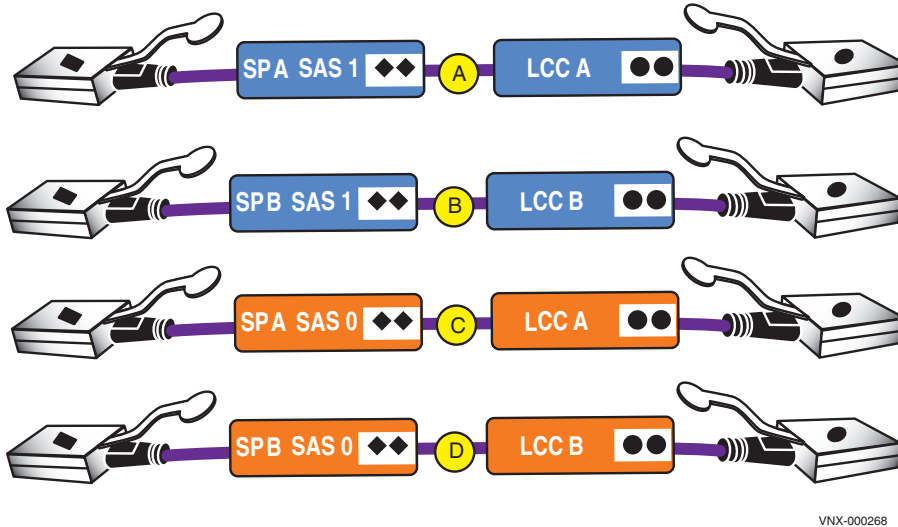
Figure 19 SAS cables for the first two DAEs

The SAS ports on the DPE are labeled 0 and 1. Port 0 is connected internally to the SAS expander that connects all the internal DPE disks. Since Port 0 is already connected internally to the DPE disks, the first DAE is connected to Port 1 to balance the load on the SAS ports. The second DAE is connected to Port 0.

Note: The *VNX5300 Hardware Information Guide* provides examples of how to cable DAEs in your VNX5300 for interleaved or stacked environments.

For steps 2 through 5, connect the following cables by matching the double diamonds ◆◆ on the DPE and double circles ●● on the DAEs with the single diamonds ◆ and single circles ● on the cable connectors as shown in Figure 19 on page 30. Ensure that the cables lock into place.

2. Connect SP A SAS 1 (◆◆) to DAE 1 LCC A (●●). **A**

3. Connect SP B SAS 1 (◆◆) to DAE 1 LCC B (●●). **B**

4. Connect SP A SAS 0 (◆◆) to DAE 2 LCC A (●●). **C**

5. Connect SP B SAS 0 (◆◆) to DAE 2 LCC B (●●). **D**
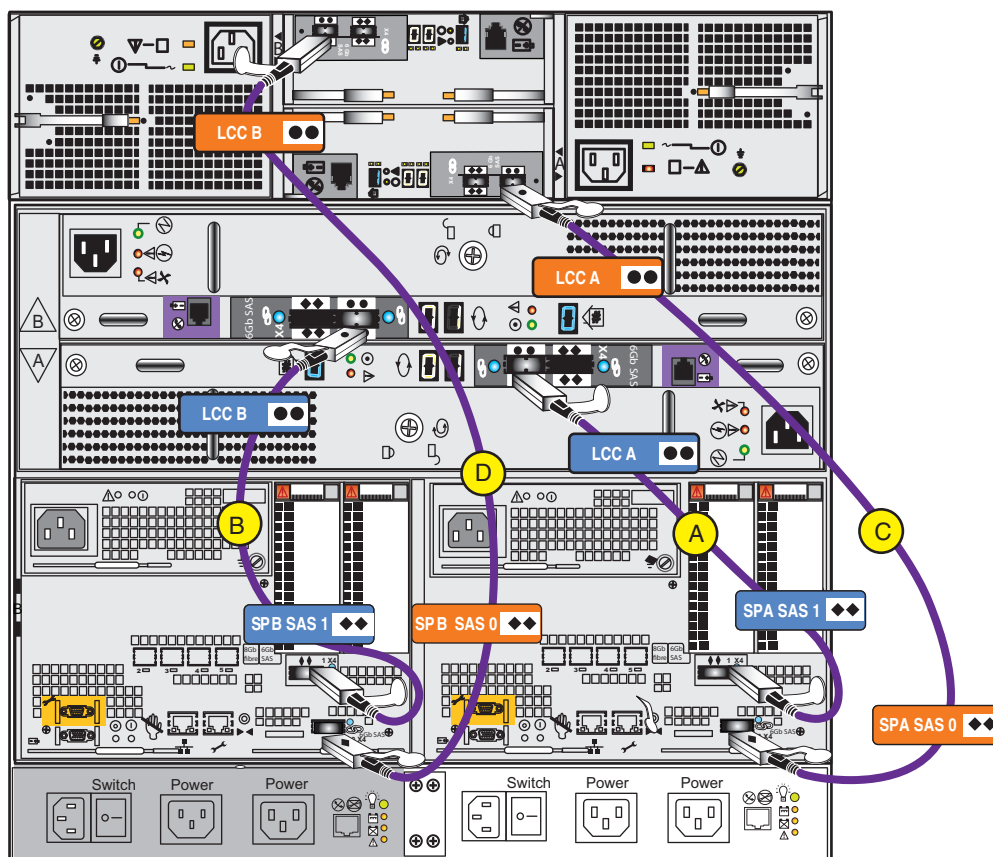
VNX-000775

Figure 20 Cabling the first two DAEs to the storage processors

Power up DAEs

Ensure that the cabinet circuit breakers are still on and the PDUs are powered on. The DAE power cables should be connected directly to the PDUs as shown in Figure 21. After they are connected, the DAEs will begin to power up.

1. Connect or verify that the DAE 1 power cable is connected to PDU A. (A)

2. Connect or verify that the DAE 1 power cable is connected to PDU B. (B)

3. Connect or verify that the DAE 2 power cable is connected to PDU A. (C)

4. Connect or verify that the DAE 2 power cable is connected to PDU B. (D)
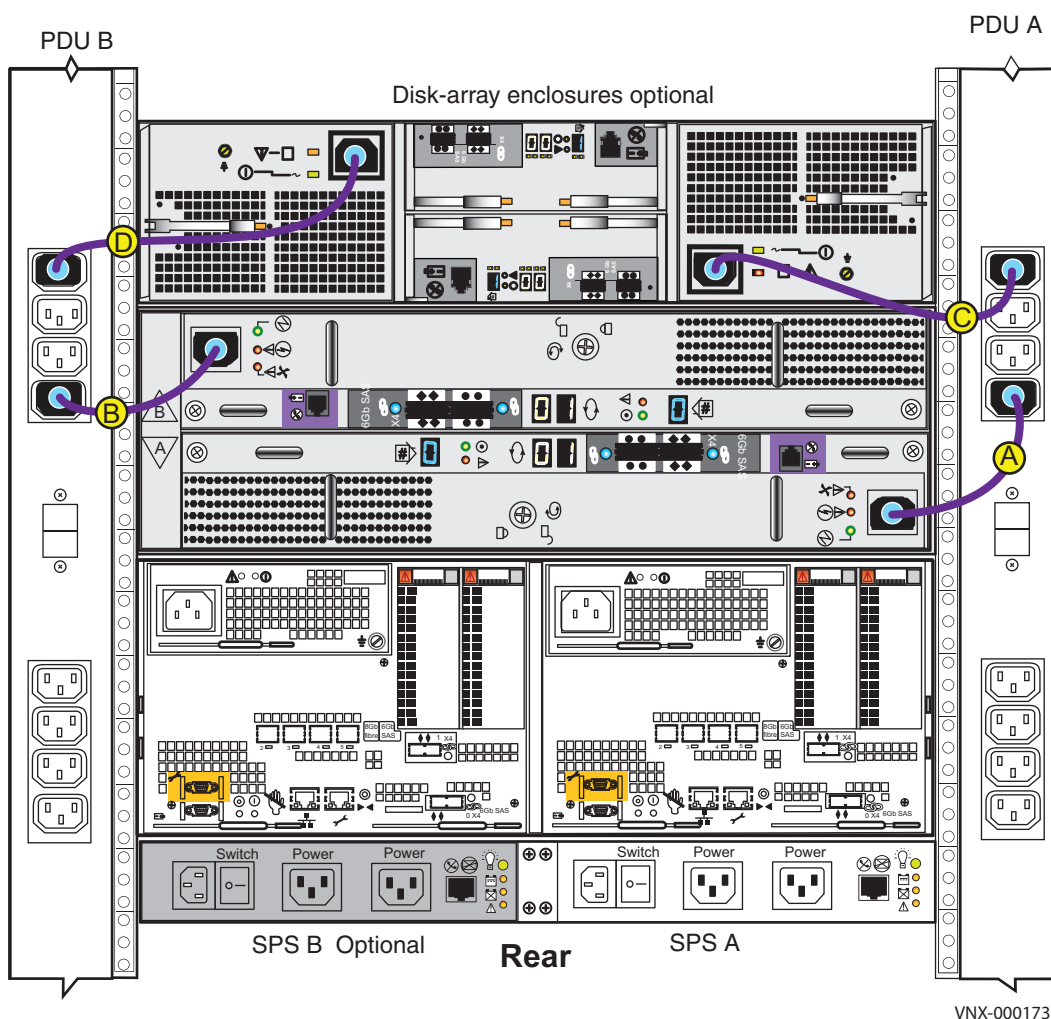
Figure 21 Powering up the DAEs

Verify DAE status

The illustrations used here focus on the LEDs that you need to verify that the system powered up correctly. The *VNX5300 Hardware Information Guide* provides more details on all LEDs.

Table 5 lists the LEDs that you need to focus on to ensure that 3U and 2U DAEs powered up correctly.

Table 5 3U and 2U DAE LEDs

LEDs	Location	State/Color	Description
DAE Fault/Status	Front	Off	OK
		Amber	Fault has occurred
DAE Power	Front	On/Blue	OK

Verify 3U, 15 3.5" drive DAE status

1. Verify that the status of the 3U DAE Power LED located on the front is solid blue and the DAE Fault/Status LED is off as shown in Figure 22.

2. If any fault LEDs are on, or if any power LEDs are flashing, contact your authorized service provider.
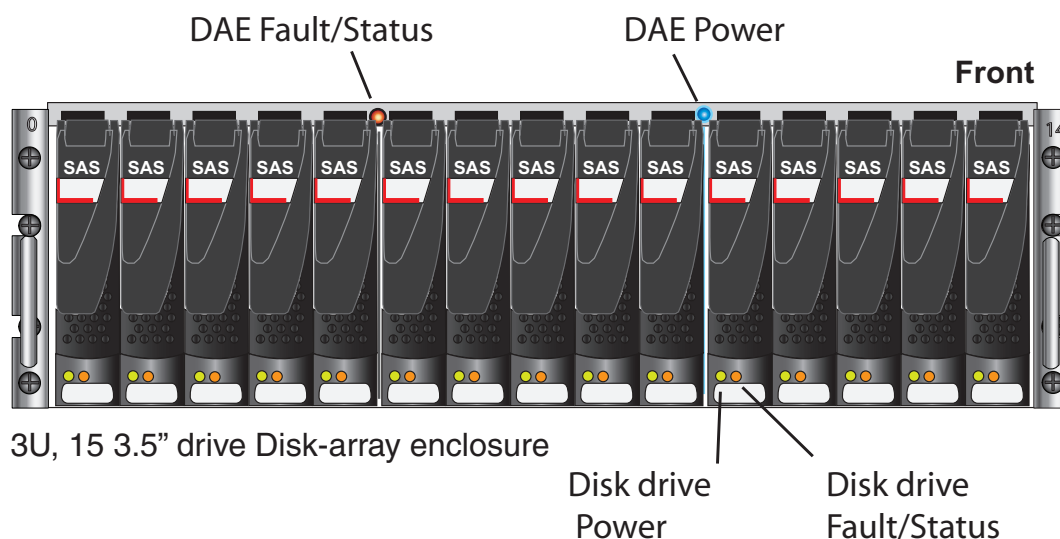
Figure 22 3U, 15 3.5" drive DAE LEDs

Verify 2U, 25 2.5" drive DAE status

1. Verify that the status of the 2U DAE Power LED located on the front is solid blue and the DAE Fault/Status is off as shown in Figure 23.

2. If any fault LEDs are on, or if any power LEDs are flashing, contact your authorized service provider.
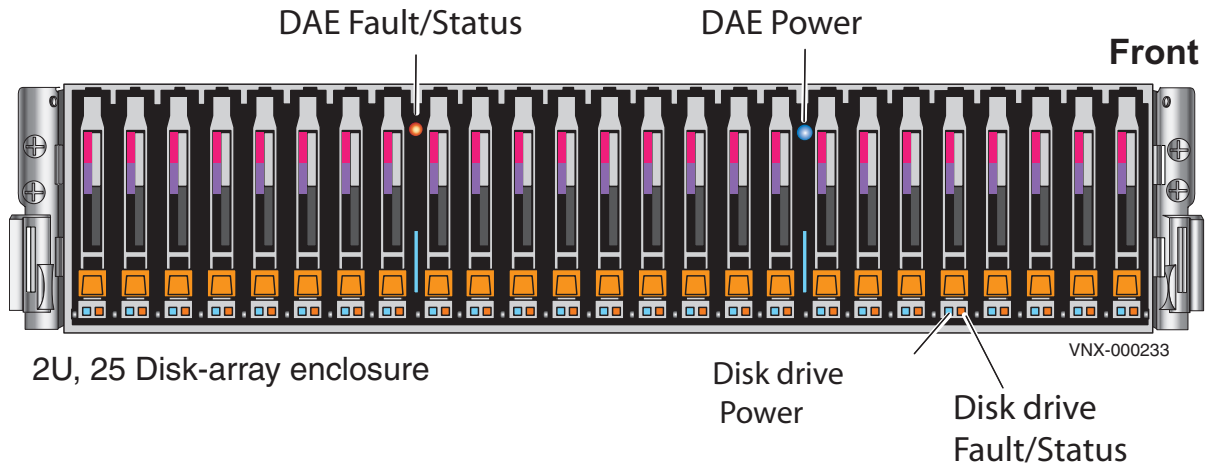
Figure 23 2U, 25 2.5" drive DAE LEDs

Setup

After you have completed all of the installation steps, continue to set up your system by performing the post-installation tasks in this section.

Connect a management station

You must connect a management station to your system directly or remotely over a subnetwork.

This computer will be used to continue setting up your system and must be on the same subnet as the storage system to complete the initialization.

Setting up a Unisphere Management Station for the VNX Series is available on https://mydocs.emc.com/VNX/relatedDocs and provides information on different types of Unisphere management stations.

Initialize your storage system

If your system shipped with a VNX Installation Toolbox (VIT) CD, use the Unisphere Storage System Initialization Utility located on the CD to initialize your system. If your system did not ship with a VIT CD, download the latest version of the VNX installation utilities from the Support website.

IMPORTANT

You will need the information from the "VNX Block Configuration Worksheet" on page 41 in the initialization process.

Downloading the Unisphere Storage System Initialization Wizard

1. Go to https://Support.EMC.com and select **VNX Series › Install and Configure**.

2. From **VNX Installation Tools**, download the **Unisphere Storage System Initialization Wizard**.

   Note: If your host is behind a firewall, open the UDP ports 2162 (outgoing) and port 2163 (incoming). These ports are used by the initialization utility. If these ports are not opened, the initialization utility will not function properly.

3. Double-click the downloaded executable and follow the steps in the wizard to install the utility.

4. On the **Install Complete** screen, make sure that the **Launch Unisphere Storage System Initialization Wizard** checkbox is selected.

5. Click **Done.** The initialization utility opens. Follow the online instructions to discover and assign IP addresses to your storage system.

If you encounter any issues during initialization:

- Go to https://mydocs.emc.com/VNX/ and click **Before you begin** to read about known issues and suggestions.

- Go to https://Support.EMC.com, select **VNX Series,** click **Search Support,** and enter the specific failure message into the EMC Knowledgebase for possible resolution and corrective action.

Update the storage system software and register your system

The storage system comes pre-installed with the latest version of VNX Operating Environment (OE) software available at the time of shipment. The Unisphere Service Manager (USM) is a collection of tools that helps you update, install, register, and maintain your system hardware and software. Use USM to check for and install an updated version of the VNX OE software and register your storage system.

Downloading USM documentation

1. Go to https://Support.EMC.com and download the *Unisphere Service Manager Requirements and Installation* document available on the VNX product page.

2. For additional information on using USM, go to https://mydocs.emc.com/VNX/.

3. Under **VNX tasks,** select **Update VNX software**.

4. Select appropriate settings for your configuration to generate a customized procedure.

Downloading Unisphere Service Manager

1. Go to https://Support.EMC.com and select **VNX Series › Install and Configure**.

2. From **VNX Installation Tools,** download **Unisphere Service Manager**.

3. Save the executable to your management station.

4. From the folder where you downloaded the executable, double-click the file and follow the wizard's steps to install USM.

5. On the **Install Complete** screen, leave the **Launch Unisphere Service Manager** checkbox selected.

6. Click **Done**. Unisphere Service Manager opens.

7. Click **Login**.

8. Connect to your system by entering the host name or IP address and click **Connect**.

Downloading the latest version of the VNX operating environment software

1. Select **Software › System Software**.

2. Run the **Prepare for Installation** wizard to check for an updated version of the VNX OE.

3. If available, then run the **Install Software** wizard to install the update.

Registering your system for service with your service provider

1. Run the **Storage System Registration wizard** in Unisphere Service Manager.

2. From within the USM, select **Register › Register Storage System**.

3. Follow the steps in the wizard to complete the registration process.

You can also use USM to:

◆ Install and update Firmware

◆ Install language packs (if purchased)

◆ Install software enablers (if purchased)

Check system health

Login to Unisphere to check the health of your system, including alerts, event logs, and statistics.

1. Open a browser and enter the IP address of SP A.

2. Use the sysadmin credentials to log in to Unisphere. You may be prompted by certificate-related warnings. Accept all certificates as "Always Trust".

3. Select your storage system and select **System › Monitoring and Alerts**.

Set the storage system cache values.

You must allocate cache on the system. Allocate 10% of the available cache (with a minimum of 100 MB and a maximum of 1024 MB) to Read and the rest to Write.

Memory/Storage Processor:

Maximum RAM/SP (MB) 8000

Maximum Write Cache (MB) 3997

1. Open a browser and enter the IP address of SP A.

2. Use the sysadmin credentials to log in to Unisphere. You may be prompted by certificate-related warnings. Accept all certificates as "Always Trust."

3. Select your storage system and select **System › Hardware › Storage Hardware**.

4. From the task list, under **System Management,** select **Manage Cache**.

EMC Unified Storage Best Practices for Performance and Availability: Common Platform and Block Storage 31.5 - Applied Best Practices white paper available on https://Support.EMC.com provides more information on cache settings and recommendations.

Install ESRS and configure ConnectHome.

You can ensure that your system communicates with your service provider by installing the VNX ESRS IP Client.

IMPORTANT

You will need the information from the ESRS Worksheet in this configuration.

Downloading ESRS documentation

1. Go to https://mydocs.emc.com/VNX/.

2. Under **VNX tasks**, select **Initialize and register VNX for block and configure ESRS.**

3. Select the appropriate options for your configuration.

4. Select **Install and Configure ESRS** to generate a customized version of *EMC Secure Remote Support IP Client for VNX Requirements and Installation* document.

Downloading ESRS IP Client

1. Go to https://Support.EMC.com and select **VNX Series › Install and Configure.**

2. From **VNX Installation Tools**, download **EMC Secure Remote Support IP Client**.

3. Install the ESRS.

4. Follow the wizard to set up the ESRS and test the ConnectHome process.

Configure servers for VNX systems

Go to https: //mydocs.emc.com/VNX/ and from the Server tasks list, select an appropriate task such as:

◆ Attach server

◆ Install or update software (VNX for Block)

◆ Verify Server high availability, using Unisphere Server Utility

Provision storage

Provisioning storage includes:

◆ Creating RAID groups/storage pools

◆ Creating LUNs

◆ Assigning LUNs to the host servers in its storage group

To provision storage:

1. Launch Unisphere and select your system.

2. Select **Storage**.

3. From the task list, under Wizards, select **LUN Provisioning Wizard.** Use this wizard to create LUNs and, optionally, assign the LUNs to a host/server system.

    For more information on these tasks, follow the instructions in the Unisphere online help.

Attach bezels

When all of the components have been installed, all of the screws have been tightened, and all of the cables have been installed securely into the proper ports, return to the front of the site rack and select the correct bezel for the component and press the bezel into place on the front of the component.

1. Locate the bezel for each installed component.

2. On the front of the rack or cabinet, position and align each bezel to the front-mounting brackets on the corresponding component.

3. Press the bezel into the bracket until it clicks into place as shown in . Bezels have a lock built in to them, so you can opt to lock the bezels in place with the key provided. To lock the bezel, insert the key and turn it one quarter turn clockwise.

4. Repeat steps 2 and 3 for the remaining bezels.
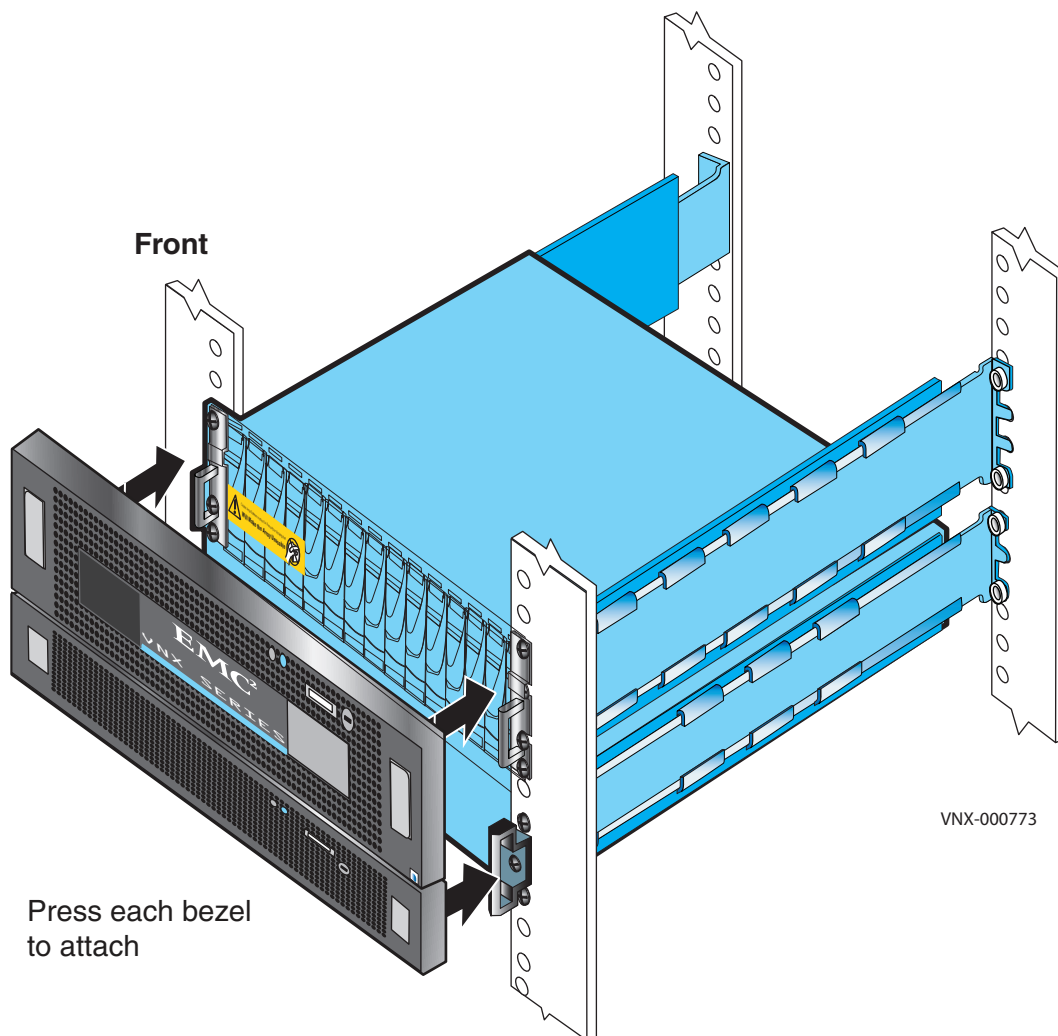
Figure 24 Attaching the bezels

Planning Worksheets

VNX Block Configuration Worksheet

With your network administrator, determine the IP addresses and network parameters you plan to use with the storage system, and record the information on the following worksheet. You must have this information to set up and initialize the system.

You manage the storage system through a dedicated LAN port on each storage processor. These ports must share a subnet with the host you use to initialize the system. After initialization, any host on the same network and with a supported browser can manage the system through the management ports.

Record network information for your system on the worksheets on the next pages. Your network administrator should provide most of this information. For more information, refer to your configuration planning guide.

Table 6 IPv4 Management Port Information

	IP Address	Subnet mask	Gateway
SP A			
SP B			

Note: Do not use 128.221.1.248 through 128.221.1.255, 192.168.1.1, or 192.168.1.2 for an IPv4 IP address.

Table 7 IPv6 Management Port Information (optional; manual configuration only)

Global prefix	
Gateway	

Table 8 Login information for the storage system administrator

Field	Description	Value
Username	User choice	
Password	User choice	
Storage-system serial number	The serial number is located on the PSNT tag hanging from the rear of the DPE chassis. The number is identified as SN/Product ID.	
Scope	Global or Local	

Table 9 IPv4 address for iSCSI targets

SP, slot and port	Local port number	Target port IP address	Subnet mask	Gateway
SPA, slot __, port 0				
SPA, slot __, port 1				
SPB, slot __, port 0				
SPB, slot __, port 1				
SPA, slot __, port 0				
SPA, slot __, port 1				
SPB, slot __, port 0				
SPB, slot __, port 1				
SPA, slot __, port 0				
SPA, slot __, port 1				
SPB, slot __, port 0				
SPB, slot __, port 1				
SPA, slot __, port 0				
SPA, slot __, port 1				
SPB, slot __, port 0				
SPB, slot __, port 1				

Table 10 IP address for each iSCSI NIC or HBA port (iSCSI initiator)

Server and Port	Initiator IP Address	Subnet Mask	Default gateway

Table 10 IP address for each iSCSI NIC or HBA port (iSCSI initiator)

Server and Port	Initiator IP Address	Subnet Mask	Default gateway

ESRS Worksheet

The following information is required to set up Secure Remote Support IP Client.

Table 11 Content required for ESRS setup

Field	Description	Value
VNX System or Off-Array Unisphere Manager	The system IP address or the host name of a workstation running Unisphere Manager (Off-Array)	
Unisphere Manager Login Username	Global username with administrative privileges	
Unisphere Manager Login Password	Global username password	
SMTP Server IP address or host name	If your ESRS IP Client installation will use the optional email notification as a backup communication method for the Call Home feature, you will need connectivity to an outgoing SMTP server. You must provide the IP address for the SMTP server.	
Email address	You must provide your email address (in the **from** field) for email notification.	
Proxy Server Settings	If the monitor station connects to the Internet through a proxy server, you must indicate this during the ESRS IP Client installation and provide the IP address, port, and protocol (HTTPS or SOCKS) for the proxy server.	
Proxy Server IP address or network name		
Protocol to be used (HTTPS or SOCKS)		
Port number of the proxy server		

Proxy server login credentials
   Username
   Password
	You must supply login credentials for the proxy server. You must supply both the username and password for authentication.	

Powerlink login information
   User name
   Password		

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